CAIR/CAMR Workgroup Meeting
August 17, 2005

Leanne Tippett Mosby

Thank you all for coming today. I appreciate you taking time out of your busy schedules to come and talk about these very important issues with us. Today's meeting is going to be mostly presentational if you will. It will be Rick Campbell of my staff. Many of you know he is our go to guy on both clean air interstate rule and clean air mercury rule. And Mike Jay from EPA Region VII, we're very pleased to have him today, and they are both going to be doing some presentations. Feel free to ask questions as we go along. Really the main purpose today is to make sure everybody understands where we are. We probably won't get to a lot of requesting decisions from you today. We may get to one or two items that we can discuss and maybe reach a consensus on or get a direction on. But the main purpose really in for informational purposes and to get everyone up to speed. There is quite a bit to get up to speed on. I know one thing I want to mention is that there is a lot of controversy out there about not so much clean air interstate rule but the clean air mercury rule. And a lot of people have a lot of strong feelings about that rule and really our purpose here today is not to get into that controversy but we have to work with the cards we're dealt and our purpose is to go through what was promulgated and what our requirements are thus far. Now that said, we know that there's a lot of uncertainty out there with litigation and that sort of thing. But we're just going to pretend like we know where we're headed and work with what we have and what we know we have right now and we'll have to address those other issues as they come up. That will be in the future and we'll work with those as we have to. With that, that's all I really had to say today, just to welcome you and to thank you again for coming. Unless you have any particular questions for me before Rick or Mike get started.

Rick Campbell

Our agenda for today is to go through an overview of the workgroup process and go over some goals and purposes for this workgroup. Mike Jay will give a summary of clean air interstate rule and clean air mercury rule. I'll give a small overview of EPA's August 1, 2005 federal implementation plan that they proposed. Then I'll also go over some of the compliance options for the state for both the clean air interstate rule and the clean air mercury rule, and both our cap and trade programs just to get a general overview. Finally we'll end up with the decisions that we need to make to at this time and a question and comment period. And then wrap up and schedule our next meeting. The purpose for this workgroup as Leanne said is an implementation workgroup. We're working to implement the regulations that we have at this time if those regulations change at some point during this process we'll reevaluate where we are and where we need to be at that time. One of the major goals for this workgroup that I see is to provide directional guidance for the department and responding to EPA's regulations. There are several avenues we can go through later the state could follow to implement the clean air interstate rule and the clean air mercury rule. And then finally rule language in later workgroup meeting once we start down the process of actually nailing down a rule we'll look to this group for decisions on rule language and how to implement individual rules. Again, the two rules that we're looking at right now are the clean air interstate rule and the clean air mercury rule. Goals for this first

meeting again are our backgrounds, we want to bring everybody up to the same basic level of knowledge. And then hopefully in this first meeting we'll get to the point where we're getting some directional guidance for the department as to which basic direction that the group wants to take this rulemaking. And then establish the communication process. We're setting up a website, but it isn't done yet. And the email group, hopefully everyone has had an opportunity to sign in and provide us with an email address so that I can put you on the email group

Wallace McMullen

That didn't have email on it.

Rick Campbell

The top one did. If you can, we're going to take a couple of breaks throughout the morning, if you can please stop and put your email address on there somewhere so I can reach you and get you in out workgroup. Any questions before I turn it over to Mike?

Mike Jay

Good morning everyone. I greeted some of you as you came in. I've been introduced already, but again, my name is Mike Jay, I'm an environmental scientist with Region VII. I want to reserve the bulk of the meeting for Rick and MDNR to get done what needs to be done here today and I think that's trying to understand what some of the flexabilities for CAIR and CAMR. To give you an idea of what I have to offer you, in a regional office we are not the authors of this rule, and I'm not trying to deflect criticism, we're open for that. I'll take praise as well. Mostly the clean air markets division who institutes the Title IV program, is the one who put forth this rule. Both clean air mercury rule and CAIR. And probably most familiar with it. I have probably read through about 90 percent of the rule. I'm familiar with many aspects of it, maybe not all of it. I have been talking with the city of Higginsville, they've already had a couple of questions that I wasn't quite sure I could answer. We'll get to those questions and can move forward with any answers provided. I know we don't have time to do it today. I don't want to concentrate on the rules, cause Rick will go into that. But I'd like to concentrate on the benefits of the rule. The costs are not insignificant but it's important to talk about the benefits both these rules provide. I'll spend a little bit of time talking about that. By way of introduction, we really have two ways we can address emissions from power plants. There are really two ways we can address pollution in general. And that is through the use of legislation, which is enacted by congress, such as the Clean Air Act of 1990, and the reauthorization. Or congress is specific to us about the flexabilities we have in interpreting it and creating rules. Fairly simple if legislation were utilizing existing Clean Air Act to create rules. Which is what we've done here today. The Clear Skies Act never made it out. And it's not to say that it's dead, the Environment of Public Works Committee worked hard on moving it out this past spring and that was multi – pollutant legislation. That's what we would like to have. It makes things very clear about what it is we can and can't do. That's what's prescribed by congress. We like legislation because typically it's more resistant to challenges. When we issue a rulemaking we're always challenged. Based on our interpretation of authority that's been granted to us with the Clean Air Act. So both of these rules come from the rulemaking authority and us interpreting the Clean Air Act. One of the most contentious issues the Clear Skies Act was CO2, I wanted to throw that in there. That

was really a deadlock. We had some Senators that wanted to move forth with a multi-pollutant that included mercury, SO2, NOx, and CO2. So the CAIR approach, how do we determine this? We're using the authority of Section 110(a)(2)(D) of the Clean Air Act. Which is basically looking at downwind contribution to interference of maintenance or nonattainment in downwind nonattainment areas around the state. So basically we went and looked at individual state's contribution to downwind attainment or interference of maintenance. You do this by way of modeling. The model specifically was CMAQ and that was used in order to zero out state's emissions and determine the significant contribution was occurring. And for the state of Missouri it was found for both PM 2.5 and 8-hour ozone. The state of Missouri emissions contributes significantly to downwind nonattainment interference of maintenance. This is how we defined the geographic boundaries. The next step of course then to once the state is then eligible, is to analyze highly cost-effective reductions of SO2 for PM 2.5, for NOx, and ozone. If you go back and take a look at the analysis that is available you'll see that power sectors themselves cause of it's ability to produce a lot of SO2 and a relatively large amount of NOx. We are controlling the other programs and we found that was one of those cost-effective measures of controlling both of those precursors. The next step is to create the program. It's a two phase program with declining caps and 2009 for NOx, 2010 for SO2, and for both 2015. Again the cap is declined. The next step is to develop emissions budget for the state that choose to achieve its emissions reductions by requirements, basic reductions from EGUs. And then to create a parallel emission reduction program to offer the state flexibility in determining how they go about achieving those reductions. So think of it like this, the controls – the amount of reductions per base on cost effective controls for EGUs. And that is the amount of reduction the state is required to make regardless. If they choose not to control EGUs or partially EGUs they have to find the total amount of reduction you would have gotten by controlling EGUs through our model rule.

Here are some of the benefits I'd like to go over. By 2015 CAIR will result in between 85 and 100 billion health benefits each year. Seventeen thousand premature deaths, 22,000 non-fatal heart attacks, 500,000 lost school days will be avoided. NOx and SO2 both also form PM 2.5 and effect visibility. So visibility in a class I area, think of them as national parks will be improved as we reduce PM 2.5. So there's an additional benefit there. There are other ones as well. In fact, the mercury rule relies on Clean Air Interstate Rule to reduce the mercury. So the first stage of the cap in the mercury rule is in fact just the implementation of CAIR. Because those controls also reduce mercury emissions. In 2015 CAIR will cost about 3.6 billion a year. We've talked a little bit already about how Clean Air mercury rule builds off CAIR. The Clean Air mercury rule will reduce emissions 70 percent from 48 tons as they are right now to 15 tons a year. Because emissions can be banked in the first phase, mercury productions are predicted to be 31 tons in 2010. So if you fall under that 38 ton cap in 2010 the modeling shows that CAIR will significantly reduce the majority if the coal fired power plants mercury emissions that deposit in the United States. I'll go over a couple of charts that show the modeling results so you can get a feel for the amount of mercury emissions that contribute to deposition here in the United States. And then hopefully you will also realize the depth like that. Mercury is certainly more of a global concern, but it's one in which we believe we are taking the best steps at our agency to produce the largest remaining uncontrolled source of mercury here in this country. The Clean Air Mercury Rule is expected to make additional reductions in emissions that transport regionally and deposit domestically. Emission reductions occur while economic strength is preserved and the US maintains both low electricity prices and fuel diversity. So what are the key elements of the Clean Air Mercury Rule? Basically it establishes two things –

one is a standard of performance. This will be the cap and trade program ultimately. There reduce nation wide utility emissions. So as opposed to CAIR that's occurring in just the eastern half of the United States mainly, the Clean Air Mercury Rule is throughout the country for coal powered units. First phase gives a 38 ton cap and emissions will be reduced by taking advantage of "co-benefit" reductions – that is, mercury reductions achieved by reducing sulfur dioxide (SO2) and nitrogen oxides (NOx) emissions under CAIR – the new Base Case. And in the second phase, which is comes in 2018, coal-fired power plants will be subject to a second cap, which will reduce emissions to 15 tons upon full implementation. Don't forget the new coal fired power plants that come into existence will have to meet not only the cap and trade program allowances, but will also be subject to the performance standard, which establishes emissions limitations. CAMR offers an optional cap and trade program based again on the Title IV acid rain program and the NOx budget trading program, which really are the flagship of EPA. They probably have been the most successful programs for us. They harness the power of the industry and allow them to make the best decisions for the utilities. We found that to be very cost effective. In fact, even when arguments are being made about the effectiveness of that program before it was implemented, cost ranged all over the board on a per ton basis. When it was all said and done, costs were orders of magnitude less than some of the predicted scenarios that were out there, even our own expectations. So again, we're trying to make use of those programs for both CAMR and CAIR. Ultimately, at the same time, we'll allow states some flexibility on how to achieve these productions and including whether you want a trading program. It's important to understand that the state has discretion on what program you choose. Next slide.

Should be a map of the US showing you the CAIR region. There are three programs in CAIR. One is the ozone season program. Where you could be included if you contributed to ozone problems or if you contributed to PM 2.5 interference of maintenance or nonattainment. You're included in the annual program for both NOx and SO2. So you can see here that for Missouri because they were found to contribute to PM 2.5 and nonattainment and 8-hour ozone problems they're included for both. So Missouri is at least subject to the three programs. Next slide please.

You all have probably seen something like this before. This slide gives you a characterization of the proportion of emissions that come from power plants for SO2 and NOx. So this is all sources all combined. The power sectors by far and away in terms of SO2 is the largest source out there. NOx emissions are not as much. I think it comes as a surprise to some people, but in fact, non road emissions are, I should not use non road. Vehicles that are not permitted to run on the highway, including construction equipment, etc. have significant NOx emissions. We'll be implementing rules here in time to control those emissions in the future and now. As well as for vehicle emissions. Next slide please.

Here are those rules and the reductions that we expect to achieve. My slide is reflecting white so SO2 being at the bottom and NOx at the top you can see the contribution of NOx from the rules that we just talked about. Next is the Interstate Rule which is out there and will be coming into effect, tier two vehicle emission standard, non-road diesel rule which I believe, I'm not sure that has been finalized yet or not. The NOx SIP call, which is in place and lastly what I call the weed eater rule on the far right, non road large spark-ignition engines and recreational engines. Next slide.

This slide shows the national NOx and SO2 emissions from power plants, just to give you an idea of what's been happening since 1980. Emissions have been steadily going down with the implementation of Title IV and NOx has also been moving down. And with CAIR we expect to have even further reductions. Next slide.

On the left-hand side of this map, at least by April 2005 are the nonattainment areas for 8-hour ozone and fine PM. Many areas such as St. Louis have both PM 2.5 and 8-hour ozone nonattainment. You can see in the eastern half of the United States that we have several areas that do not meet the standards. This is where CAIR comes into effect. You're looking at down in contributions from many in the power sector in the Midwest it certainly due to contribute to downwind nonattainment as predicted by our models. We believe it's gotten better over the years. The one on the right hand side is projecting nonattainment in 2010 after the implementation of CAIR. And existing Clean Air Act programs. So you're seeing the synergistic effect of all the programs coming in to producing these emission reductions. And at least as predicted in the model for St. Louis there's a prediction that we could achieve the 8-hour ozone standard although very close. We go from 104 ozone nonattainment counties down to 14 by 2010 as predicted by the model. For PM2.5 modeling show a decrease from 36 counties in nonattainment to 19 counties. Next slide please.

You can see things get really cleaned up later on by 2015. The purpose of CAIR is not to eliminate all of the problems. There is certainly a need for local controls in these areas that still will, at least by prediction, remain nonattainment. It's not meant to solve all these. Next slide.

I won't spend much time here it is to just give you an idea of where some of the areas, in the east and Texas are included here, how much reduction we're expecting to get in terms of PM 2.5 and 8-hour ozone. The standard for PM 2.5 is the annual standard and stands at 125 micrograms per cubic meter. Many areas teeter on the edge of that and are in fact nonattainment. CAIR does a good job of reducing the impact but none the less many areas still remain nonattainment.

I think that mercury has probably been the most, or I should say the least, rule that has been poorly misunderstood. We have not done a good job at conveying what it is we're trying to control with mercury. A lot of people believe it's controlling mercury because it's ambient air problem. We breathe mercury and some how that affects you. Mercury has always been there and should be there. It's a natural element. If a portion mercury gets in the air not only here in the U.S. but across the world it has increased dramatically. Through the use or by industrialization burning coal, and coal mines, the use of mercury in general. It has increased the burden of mercury in the atmosphere. It's not the ambient concentration of mercury that we're concerned about. It's the deposition of mercury and the subsequent bioaccumulation of methyl mercury in fish tissue. Because these are a global concern, emissions, certainly elemental emission that can travel globally and be deposited. You can see that based on this chart that U.S. power plants are right at one percent of predicted global emissions. Certainly a lot of uncertainty with the accuracy of the inventory, mercury is really hard to nail down because of the different states. It's very unusual, in fact it can exist as a gas, a solid, or a liquid and it has a vapor pressure that allows it to be vaporized and then settle and then revaporize. It's really hard to get around. So the best step is to move forward with controlling mercury emissions for those sources that emit large amounts, and do our best to control them to see if we can get some

resulting benefits in the amount of mercury in fish tissue. But I point this out only because that at least in this country the majority of emissions that are happening, or I should say the majority of deposition that occurs in this country are the result of global emissions. Next slide.

Just to give you an idea of our efforts to control mercury since 1990 in the middle there you see medical waste incinerators and municipal waste combustors and we control those sources. But emissions from those have largely been reduced. So the largest remaining source of mercury for now it the utility industry, which is a very difficult one to try and control. Both medical waste incinerators and medical waste combustors have high concentrations of mercury making the effectiveness of the control technology greater and easier to implement than it will be for EGUs. Because of the small, relatively small concentrations, of mercury and gas, it's much more difficult to try and use control technologies that have been proven in other sectors. So it's developing challenge. We feel that the Clean Air Mercury Rule the way it's structured now with a declining emission cap in 2018 the cap will be ultimately be much tighter. It will allow industry to experiment with different types of control technologies in order to come up with the best fit for that facility. Next slide.

Just a real quick overview on the mercury deposition. It's basically a summary of what I was just saying. In the left hand side told the decision as predicted by our models. That is to be a large amount of coming from the global pool, a relatively small amount coming from the power sector. The graph shows the amount of deposition coming specifically from the power sector and the ultimate reduction on the far right hand side by 2020. Next slide.

I really just wanted to make you familiar with the current state of mercury deposition. As predicted in 2001, if you look at all sources it will give you an idea in the eastern half of the U.S., where we have in general precipitation and more sources of mercury, will be a higher rate of deposition. If you look on the right hand side, if you just zero out deposition from all non utilities you can see that many areas still have high rates of deposition. Next slide.

This shows deposition from utility sources in 2001. And you see in the eastern corridor there, there are a large concentration from these coal burning units so we have higher rates of deposition.

Leanne Tippet Mosby

This is based on monitoring data?

Mike Jay

This is based on modeling data. It's an important distinction. The models have been verified, or attempted to be verified with monitoring. Which is actually sitting a monitor out there and capturing the rain and analyzing it to see how it winds up with predictions. Some are successful. Some places are accurate and other places are not so accurate. The biggest uncertainty we have is dry deposition portion. That which just falls to the ground and not through precipitation. So there's a large amount of uncertainty here. In terms of wet deposition the models do a pretty good job. But the large factor being the dry deposition. This factor is here in this model. The

important distinction modeling data. The model predicts in 2020 that the best or most reductions will be made in those areas that are putting on controls. Next slide.

So EPA has three model rules. Rick will talk about those. The state is going to participate in one or more of the three programs. States that participate in the EPA program plus use the model rules with few exceptions will work with those. The model rules parallel with existing NOx SIP Call structure for those of you familiar. Next slide.

In comparison with the rule finally just a couple of noteworthy items. That is, the first phase of NOx has moved up to 2009. As opposed to the 2010 in the proposal. SO2 will still start in 2010. All states for which EPA has made a finding with respect to ozone are subject to an ozone season cap. You might be glad to see a 200,000 allowance ton. Our compliance supplement pool was added for NOx. Based on a revised method for determining applicability Kansas was excluded. There were some minor changes to the NOx allocation and the opt in provisions, we talked about those today. The new analysis of the rule requred re-analysis of the NOx budgets for all covered states. See the timeline. I don't have mercury on here. The CAIR rule required SIPs to be submitted 18 months after promulgation and the SIP's due in 2006 in September. Rick pointed out there is proposed FIP and that's most relevant for the state. The possibility exists that there could be in essence an extension for the method of sending in an abbreviated SIP. We think this will reduce a lot of the burden of the rulemaking process. Then again that's proposed so that may change to the FIP due date per say. NOx monitoring and recording is due in 2008. There will be a whole year of that before we start in 2009. And in 2009 is the first year of the NOx program and I believe monitoring will start here in 2009 for mercury as first phase cap be in 2010. And 2010 we have first phase cap of SO2 and mercury. In 2015, the second phase of CAIR takes affect for all the programs for CAMR the second phase begins in 2018. Just to give you an overview of what's to come in terms of timing. That's all I've got. Thanks for your attention.

Leanne Tippett Mosby

Before Rick gets started I think I forgot to introduce myself. I know so many of you in the room, but I see some faces I don't recognize. So for those of you don't know me I'm Leanne Tippett Mosby. I am the Director of the Air Pollution Control Program, Department of Natural Resources. I just wanted to point out my other staff that is here today besides Rick. Jim Kavanaugh, who is Chief of Operations for the Air Pollution Control Program. He is also my deputy. Jeff Bennett, Chief of our modeling unit, and Lisa Miller, she works for Jim and she will be helping us try to keep track of what goes on at these meeting and doing minutes and that sort of thing. I know that from personal experience she is very good at that. Mike Van Cleave, who is currently in operating permits but you are getting ready to make a transition perhaps.

Rick Campbell

I think I'll briefly summarize the federal implementation plan and then maybe we'll take a break before we go into the compliance options.

On August 1, 2005, EPA proposed a FIP for CAIR. It's part of a bigger rulemaking, which also includes response to North Carolina's section 126 petition and also some amendments to the acid

rain program as well as to the Clean Air Interstate Rule. EPA's proposing to promulgate this Federal Implementation Plan on or before March 14, 2006. As you can see from the timeline that Mike gave, that will be before states are required to respond for CAIR or CAMR. Therefore all states that are effected by the rulemaking are going to be under a Federal Implementation Plan. How EPA is proposing to handle this is once a state responds with the State Implementation Plan the Federal Implementation Plan will be revoked. Be it either through a full state implementation plan or through the proposed or abbreviated plan. One thing I do want to make everyone clear on is this FIP does not effect the Clean Air Mercury Rule this is only for the Clean Air Interstate Rule. The proposed abbreviated SIP basically what it will do is the Federal Implementation Plan will stay in place, and states will have the option to make decisions on allegation methodologies, opt in units, whether or not opt ins will be allowed and what are their procedures for those opt ins. Those would be if an industrial source, non electric generating unit, would want to opt in to the trading program. If you're familiar with our NOx SIP Call that we just implemented in the eastern part of Missouri, we do not have opt ins allowed. That is something we would want to revisit and see if that was still the case or if we wanted to go ahead and allow those sources into a trading program. The states would be allowed to establish the distribution methodology for the supplemental compliance pool. In the options portions of my presentation we'll talk about how big the pool is for Missouri. That 200,000 tons that EPA set aside we only get a portion of that. And the finally, for Missouri this is important because in our NOx SIP Call process we did include industrial boilers in our trading program. We have the option to go back and relook at that and either continue to include the industrial boilers in the seasonal portion of the NOx SIP Call or seasonal portion of CAIR, which is replacing the NOx SIP Call. So that's another decision that the state's going to be reviewing soon. Next slide.

For those of you new people, I wanted to discuss briefly what a State Implementation Plan actually is. As it says, it's a document that describes how a state will attain and maintain a national ambient air quality standard. This can include things like rules, other documentation, permits, and administrative consent orders. Every State Implementation Plan will have to be federally enforceable and must be federally approved. We're in the process with the NOx SIP Call State Implementation Plan we have submitted to EPA and we're waiting for EPA to review it, find it complete, and then go through their federal rulemaking process. Either a full State Implementation Plan or the abbreviated State Implementation Plan will have to go through that same process. Next slide

Finally the Federal Implementation Plan made a couple of changes to the Clean Air Interstate Rule. They proposed to amend the applicability for electric generating units. Under CAIR the applicability was any greater electric generating unit that has served a 25 megawatt generator since it's initial firing. We have quite a few older units in the state of Missouri dating back into the 40's. Any generator change from that time in the 1940's we would have had to been tracked. Our data system really isn't capable of doing that so this change is nice. What EPA is proposing to do is change that to "since 1990" if a unit has served a 25 megawatt generator. For a lot of these units it cuts a lot of the time off. They have also added the exemption for solid waste incinerators, which for us I don't think is a big issue but in the eastern portion of the CAIR region it was a bigger issue. They have proposed a few amendments to the acid rain program, mainly these are just to align the acid rain program and the clean air interstate rule. With the Federal Implementation Plan there are some changes that needed to be made. One of the big ones is under the acid rain program a unit is allowed, I believe, to have two authorized account

representatives. EPA is proposing to eliminate that and only have one. Mike correct me if I'm wrong on that. They did make some amendments to the appeals process. Next slide.

Any questions on the proposed FIP? Why don't we take a 10 minute break.

Rick Campbell

It has been suggested that since we are a small group that we go around and let everybody introduce themselves and who the represent. My name is Rick Campbell, I'm an engineer in the Operations Section in the Air Pollution Control Program. Let's start down here and work our way up.
Richard Allen, Solid Waste Management Program, of the Department of Natural Resources. I'm here for two reasons, I'm the Division mercury person, and I'm also concerned with tire derived fuels and it's use of the power plants.
Jim Kistler of Associated Industries of Missouri.
Rick Anderson, Energy Center, DNR
Stacy Maxwell, Central Electric Power Cooperative, Chamois, we have a coal fired, two units actually.
Jeff Bennett, Air Program
Terry Eaton, KCP&L
Steve Brooks, Aquila
Bill Gladden, Independence Power & Light
Scott Weis, TriGen
Ted Johnson, City of Columbia
Dean Busch, Anheiser-Busch
Don Trigg, City of Higginsville
Henry Robertson, Missouri Coalition for the Environment
Wallace McMullen, Sierra Club
Cheryl Hammond, Sierra Club
Steve Hilger, Calpine - Aries Power Project
Steve Whitworth, Ameren
Mike Menne, Ameren
Charles Means, Associated Electric
Shaen Rooney, Empire District Electric
Cherri Baysinger, Missouri Dept. of Health and Senior Services
Kristi Campbell, Missouri Dept. of Health and Senior Services.
Mike Van Cleave, Air Program
Lee Barker, City of Higginsville
Verbal Blakey, BHMG Engineers
???, REGFORM
Dave Fraley, City Utilities in Springfield
Leon Binder, Public Service Commission
Randall Pick, Sikeston BMU
Chester Cardwell, Sikeston BMU
Chris Schrieber, Schrieber Engineering
Michael Jay, US EPA
John Noller, DNR

Rick Campbell

Hopefully before the next meeting we'll have a little better idea of the size and get a little smaller room. By that time we'll be doing more of a round table type meeting, so we'll try and get something more compatible with that type of meeting. Let's move forward into the Clean Air Interstate/Clean Air Mercury Implementation Options. Next slide.

As Mike said, the Clean Air Interstate Rule established a cap for basically eastern one third of the nation. Missouri as part of that cap was given 137, 214 tons in 2010, the second phase in 2015, and so on. There are two NOx caps as part of the Clean Air Interstate rule, there's the annual cap, and you can see what the caps for Missouri are in 2009 and 2015. Next slide.

The seasonal NOx cap, which basically will replace the NOx SIP Call, with the exception that it is a statewide program not the eastern one third. And again for 2009 and 2015, the supplemental compliance pool - for those of you that are not used to our jargon – the supplemental compliance pool are allowances that are given above and beyond the cap for the first couple of years of the program. These are just to allow sources to phase in, their compliance if they are not able to get to the cap in the first couple of years, it's to help for that. It's similar to what was done in the NOx SIP Call. Just a little bit on how the caps were developed. EPA in their rulemaking process used their integrated planning model to develop a region wide cap and then the caps were distributed to the states by the state's percentage of heat input. The cap really is a region wide cap and Missouri's cap is just born out of that from the actual heat input from the electric generating units in Missouri. Next slide.

The Clean Air Mercury Rule similar to the Clean Air Interstate Rule established statewide caps for mercury. Beginning in 2010 we are allowed 1.393 tons of mercury for the state. That ratchets down in 2018 to .55 tons of mercury. It's similar way that EPA took to develop the mercury cap. I believe it was a national cap in the integrated planning modeling. Then it was distributed based on heat inputs again. Next slide.

Applicability – the Clean Air Interstate Rule applies to a fossil fuel generated unit. Electric generating unit, sorry. Which has as of right now as it is written that serve a 25 megawatt or bigger generator since it's initial firing. Again, in the Federal Implementation Plan they are proposing to change that to "since 1990." I see it as a way to make the applicability easier determine. There is a co-generator exemption. I'm not going to go through it, it's a long and lengthy exemption and there is a proposal to have a solid waste incinerator exemption as well. Clean Air Mercury Rule only applies to coal fired units at the same level of applicability as a 25 megawatt generator that since it's inception is the same language. We haven't seen anything in that language to include the 1990 date, but EPA has talked about putting out a Federal Implementation Plan for the Clean Air Mercury Rule. So we'll have to see if that comes out in there as well. Next slide.

As part of the Clean Air Interstate Rule states are given the option of either controlling just electric generating units or going on their own and controlling other sources and other generating units or just other sources. This is kind of a decision tree that we've put together. The first choice is what sources do you want to control. The asterisk is there because we've got to make

that choice twice. If we do choose to control only electric generating units, as part of the seasonal NOx program because of our NOx SIP Call choices we have the industrial boilers in our NOx SIP Call rulemaking and at this point we can choose to either keep them in the rulemaking or take them out. A side note there for the industrial boilers represented here today. It doesn't get you away from having a rulemaking. We will have to go back and to fill a backsliding issue implement an industrial boiler regulation at that time. If we choose to control other sources we get on the other side of the tree. Next slide.

If we get into the trading tree there you can see there are choices that EPA will allow us to make as a state and still be in the EPA administrative regional trading program. It's a little different that the NOx SIP Call in this case because they are not being as flexible as to what we can change in the model rule. With the NOx SIP Call they were pretty flexible as far as changing, reporting, or other issues. They have given us a definitive number of criteria that we can change. Some of those are the opt in previsions. Those are clearly up to the state as to whether you allow opt ins, how you do opt ins. Allowance allocations are completely up to the state as well. Those can run the full gambit of direct distribution, permanent allowances, all the way up to allowance auctions to distribute. That's something we would want to have discussions later. Rick.

Rick Anderson

Could you explain what you mean by opt in?

Rick Campbell

Opt in is if you had an industrial boiler for example. If there is an industrial boiler that is interested in getting into the regional trading program they would be able to opt in to the program and there are provisions which set their base line and then will set their number of allowance allocations. There's a monitoring window that they have to go through and then there's a percent reduction that they will have to achieve before they are into the program. They don't come in, this is something that needs to be explained maybe later, is they don't come into the program under the cap that is there. They bring their own emissions into the cap.

Now if we get into the non-EGU side of the tree. Once we're out of EPA's regional trading program then it is up to the state to develop regulations on their own whether it be intrastate trading programs like what we have in 6.350, the statewide NOx rule or a state could do a command and control type regulations, or just standard regulation. As part of that decision making process you would also have to do a demonstration to show that you are meeting EPA's statewide cap and that could be a little tougher hurdle. You are going to have to go through the monitoring and the emission inventory reporting record keeping that is already in EPA's model rule. Those are things that we would have to develop on our own. Next slide.

Clean Air Mercury Rule is a little simpler. You have the EPA model rule with some requirements that the state has choices on like allocations, reporting requirements, monitoring requirements. I'm not sure because monitoring is not that defined right now for mercury, I think they will allow a little leeway if you can prove that you are equivalent to what is in PART 75. But there's probably not that much leeway there. There's the option for states to meet your cap under a different type of regulation if you chose not to go into the regional trading program.

Again, you will have to develop your own control plan, your own regulation, do a demonstration, and set up the reporting requirements to communicate that to EPA that we are meeting their cap. Next slide.

Some other considerations, as part of both the Clean Air Interstate Rule and the Clean Air Mercury Rule EPA stated that there is an auto SIP approval. If you develop a regulation that adopts significantly EPA's model rule with changes in the areas that they say we can change, the EPA approval process is fairly quick. Anything outside of that and the approval process will be longer, with heavier scrutiny than you will if you stay with the model rule and stay within what they told us we can change. The Best Available Retrofit Technology, or BART, is part of the regional haze program. EPA has recently come out with guidance that an EGU that is in compliance with the regional trading program constitutes compliance with the Best Available Retrofit Technology standard for electric generating units. So there is an incentive there for the states to go ahead and go into EPA's regional trading program and make compliance with the BART program as well for these units. The Federal Implementation Plan, there are a lot of parts of that program or rulemaking that have direct implications on this workgroup and what the state is doing. The abbreviated SIP, there are still a lot of questions out there as far as what the state actually has to do in the abbreviated SIP. I was talking to Mike yesterday about this. We are not sure if we must adopt a rulemaking to do an abbreviated SIP and maybe a letter of intent because what's been proposed to happen is if the state submits their own emission allocation methodology, that EPA would promulgate methodology into Part 97. So it may be as simple as a letter of intent stating how you want your allocations to be allocated. And then EPA will do the rulemaking from there. There are several questions out there again on the FIP. I'm sure the state will submit comments on. And litigation, as Leanne touched on, there's quite a bit of litigation on the Clean Air Mercury Rule. There are a few rumblings on litigation on the Clean Air Interstate Rule. Those are things that as they come along we will have to see what the court says and see what direction we need to go from there. It's something else to consider in our decision making process. Any questions or comments?

Jim Kavanaugh

I'd like to just clarify the abbreviated SIP even if that's the way we go and we don't have to do a rulemaking, we still go through a public process, public hearing and get public input it is not simple a letter, to clarify that. The difference is we wouldn't have to go to through all the rulemaking steps. There are some advantages to that.

Rick Campbell

That's a good point. The abbreviated SIP, it would go through a similar process as the NOx SIP Call demonstration document. We would put it out on public notice for a 30 day comment period and present it to the Missouri Air Conservation Commission and have them hear it and hopefully, ultimately adopt it.

Rick Campbell

Basically cap and trade as in this case EPA has established an emissions cap and those allowances are distributed to the individual sources that are effected by the rulemaking. The

sources can make their decisions as to how they are going to comply. They can trade or they can bank allowances. At the end of the year one allowance is going to equal one emission unit. In the NOx and sulfur rules that is a ton, in the mercury rule that is an ounce. Trading will be on the ounce not on the ton as it is in sulfur. Allowance prices are determined by the market forces. Again, the sources are going to determine how they are going to comply with the rulemaking. They can over comply and sell allowances on the market, or they can decide to buy allowances off the market and rely on market forces to determine their compliance. One other thing that is a little different in this rulemaking is I don't believe in our NOx SIP Call rule we have the three to one surrender language. I don't think that is something we can take out of this model rule like we did the last one. To explain that, if for every ton of emissions, say in the NOx rule, for every ton of emission that you were over at the end of the year that you don't have allowances for, then next year you will give up three tons before you determine compliance. So you will have to have three tons for every ton you were over this year next year. It's a pretty onerous enforcement mechanism. It's definitely a deterrent not to be out of compliance. In addition there can be financial penalties, besides the three to one compliance. Next slide.

Question

Did you say it's going to be in this one?

Rick Campbell

If we do elect to get in EPA's model or EPA's regional trading rule I don't think that is something that EPA will let us take out. Even if we wanted to I don't think they would approve us into the regional trading program. Mike, am I speaking out of turn here?

Mike Jay

That's probably correct.

Rick Campbell

And just a few examples or trading programs. As you can see the Acid Rain Program is probably the bench mark for other trading programs. The ozone transport commission in the northeast, NOx SIP Call, Missouri Statewide NOx Rule, and the Banking and Trading rule which is 6.410. Those are a little different. They are not cap and trade programs. The 6.350 is a rate based program that applies to electric generating units and there's a couple of others that are open market trading programs. A little different but a lot of the same things. One thing to note, we have right now effecting utilities we have two trading programs. The NOx SIP Call in the eastern one third and 6.350, the statewide NOx trading rule. One of the difficulties we're going to face here is we don't want to add two more on top of that. We have to figure out a way to get that down to just one seasonal program and one annual program and satisfy all of our requirements with EPA and make compliance with those as easy as we can. One thing we're going to look at is trying to get rid of 6.350 or 6.360 or amending them in some way to make them comply with the model rule. That's one challenge for the workgroup later on when we get into rule language. Finally, the possibility of implementation costs. This is kind of a departmental thing, but I'm going to throw it out here. For the NOx SIP Call, EPA withholds

some section 105 funding to implement the program for us. The indications right now are that under the Clean Air Interstate Rule they will not withhold funding for the annual sulfur and annual NOx rules but they will withhold funding for the seasonal NOx program which replaces the NOx SIP Call. I have a question that is outstanding to EPA on under the Federal Implementation Plan whether they will be withholding that section 105 funding or not. That's just something that we're keeping in the back of our mind that is there that is an additional option for us. Any questions on cap and trade? I know that was 100,000-foot level. Next slide.

The Clean Air Interstate timeline was published May 12, 2005. We have 18 months to implement the rule, which puts us at September 2006. We're going to have workgroup meetings hopefully every two to three weeks through the remainder of this year and into next year as need be. We're looking at a Public Hearing probably in September of next year, which obviously points out that we won't make our SIP submittal date. We will push that date up as much as we can as we go through this process. There are areas in the administrative rulemaking process where we can compress things and areas where we can't. EPA is aware that our process is a long one and there are still some questions about interplay between the State Implementation Plan and the Federal Implementation Plan. Under the Federal Implementation Plan they proposed that the state do abbreviated SIPs will have until, I believe it's, March 2007 to submit those. And the September date is less meaningful since we're already under the Federal Implementation Plan if they go forward and promulgate it. If it's a little later then we are probably still ok. Adoption, our process is that you do the public hearing at the commission meeting and then the next month we will do the adoption. Right now it is scheduled for the October meeting. The SIP Submittal date as part of that package, we will have to submit a rule that is finalized. Right now we are interpreting that as has been filed with the Secretary of State's office. It's still in legal review though. We're going to go with that right now. That would mean that you could do a SIP submittal by the end of December 2006. We're a little bit late. If we can compress the rule making process a little bit we will. Next Slide.

CAMR was published three days later. However, the date under the Clean Air Interstate Rule we were given 18 months from the date that the rule was signed. Under the Clean air Mercury Rule we're given 18 months from the date it was published. There's a little difference in being that this rule is not due until November of next year rather than September. That works a little better with our rulemaking process if we push thing forward on the same schedule as the Clean Air Interstate Rule we would go to public hearing in September, adoption in October, SIP submittal hopefully by the end of the year. We can hopefully push that forward by a couple of months and actually have a SIP submittal on time. Next slide.

The initial decisions we need to make are whether this is going to be electric generating units only, or whether there is interest by the group in developing regulations for other sources. That's for both CAIR and for CAMR. Whether the regional trading program is of interest to the group or we could have a state program. What type of trading program. The first decision drives the second. And then eventually what type of SIP. Whether it will be an abbreviated SIP or a whole SIP. Obviously that is something we can't decide today. It's one of those things we'll keep in the back of our mind for a decision later. I think at this point I'd like to open it up for a little discussion from the group. If anybody wants to put their viewpoint on any of these discussion items.

What does the group think about following EPA's recommendation and just applying these two rules to electric generating units? Is that the preference of the group or is that something that you'd like to mull over until the next meeting?

Wallace McMullen

I was sitting here thinking about how to question you on that. It sounds like you really haven't explained the pros and cons of having industrial boilers in the program. Can you elaborate on that some?

Rick Campbell

I guess the biggest issue there is which side of the decision tree it puts you on. If you make the decision to include the industrial boilers or other sources besides electric generating units, then the state will be developing the regulations or this workgroup will be developing the regulation and will be out of the regional trading program.

Wallace McMullen

But the way you explained it, it's possible to choose the EPA trading program and still bring in non EGUs because we've already got the NOx SIP Call Rule.

Rick Campbell

Right. That's the secondary decision. If you choose to go on EPA's trading program for the seasonal NOx rule, we can include the industrial sources that we have in our NOx SIP Call rule. But only for that portion of CAIR, not for the rest of CAIR.

Wallace McMullen

Only the ozone season?

Rick Campbell

Only the ozone season.

Wallace McMullen

OK. Could you talk some about the pros and cons of make those choices?

Rick Campbell

As I see it the pros of going with EPA's regional trading program – 1) EPA administers the rule from the states perspective, EPA's administrative rule, we have a model rule. It's based on a program that has proven itself in the past. 2) The auto approval of the rule. EPA is not going to scrutinize the model rule or their regional trading program as closely as they would a state rule

and the state's demonstration on that rule. Those are probably the biggest pros. The cons are probably more dependent on the sources you're looking at. I guess the con would be it's only an electric generating unit program. You're not looking at an industrial boilers or maybe other larger sources that you can look at under a state program.

Mike Menne

Rick, the cap is the same either way, is that correct?

Rick Campbell

The cap is the same either way.

Leanne Tippet Mosby

Rick, I'm not an attorney, but if we would try to go some other route, then depending on what direction we take or what approach we take, if there's folks out there that don't like it do you think there would be the potential for a challenge based on 055. Because the case could be made that it will be stricter than EPA requires?

Rick Campbell

As most of you probably know, Missouri does have the no stricter than regulation for the air law as part of the air law. That is something that we need to keep in mind that we can not be stricter that the federal regulation. The way EPA has written this rule, I'm not a lawyer so I'm not going to try to interpret it.

Mike Jay

Rick, one thing to keep in mind, is the term cap. If the state chooses to go outside of the EPA model cap and trade program, those caps become binding. That means that the emission totals in terms of allowances cannot be exceeded in the cap year. As opposed to if you are in the cap and trade program, because you have the flexabilities to buy and sell allowances, you're not held accountable to that cap.

Rick Campbell
That's correct. That's one of the pros that I probably, one of the biggest pros that I left out was in the state program the cap is the state's cap. In the regional program you could if you were an importer of allowances go over that cap for the state. It allows the effected entities more flexibility in their compliance options.

Wallace McMullen

To me it seems like EPA structured this where there is really a very strong incentive to join EPAs regional cap and trade program. Maybe the only real choice is to be on that side of the decision tree. Then in the seasonal program you could include not only electrical power plants but also industrial boilers. And really that level that you're going to talk about.

Rick Campbell

To be honest, we only have two that met the applicability requirements under the NOx SIP Call. Being 250 million BTU per hour of heat input. Under that scenario I don't know that there are that many pros or cons. Other than for the individuals that would be affected, and I wanted to leave that open to them. The cap at least this is how it was done in the NOx SIP Call, I think we're probably going to have to get EPA to clarify some things. The cap only applied to electric generating units in NOx SIP Call, our industrial boilers had their own emissions allowance above the electric generating unit cap. I'm not real clear on how CAIR is going to do that. They were treated more like opt in units.

Wallace McMullen

Right, but they were provided allowances.

Rick Campbell

They were provided allowances but those allowances were not under the NOx SIP Call cap.

Wallace McMullen

Well, they were added into a larger pool.

Rick Campbell

To make the cap larger.

Wallace McMullen

Right.

Wallace McMullen

That's the understanding of CAIR.

Rick Campbell

To try and clarify that. In the NOx SIP Call we were given 13,400 tons per ozone season for the eastern one third of Missouri. That 13,400 tons was distributed amongst the electric generating units. The two industrial boilers were given allowances above that 13,400. Our cap was actually larger than what we were allocated because we brought in sources that were not part of the electric generating unit cap.

Dean Busch

Could you comment a little bit about the resources that it would take the department to go down those two tracks?

Rick Campbell

Obviously going down the track of EPA's model rule and complying with EPA's requirements to be in the regional trading program is much less onerous for the state. If we would go the other track and develop our own regulations then you have more regulations and more industrial sources groups that you put in the more regulations we are going to have to develop in this 18 month period. The additional time that the Federal Implementation Plan may give us, that would go away, I believe, as we would not be in the regional program. So we have to have a full state SIP to replace the Federal Implementation Plan. It would be a lot more onerous on the department for us to do something other than the regional trading program.

Dean Busch

So you could potentially jeopardize those due dates by the amount of work that you have to put in?

Rick Campbell

Yes. It would be obviously much more difficult.

Mike Menne

Rick, under the BART rule would you have to make a demonstration either way that we go with these regulations? Is there a different timeline?

Rick Campbell

Under the BART Rule if you are in EPA's regional trading program, that I believe constitutes all you have to do for electric generating units. You do something different then the regional trading program and you have to make the demonstrations, develop the regulation, to demonstrate that you are meeting Best Available Retrofit Technology for electric generating units. That again falls back on the state to do that.

Leanne Tippett Mosby

You might explain that the number of BART sources that are not EGU's is small and the impacts of doing something different.

Rick Campbell

The electric generating units are by far the majority of our BART sources. If we are able to go into the regional trading program then the load that is on staff that is doing the BART demonstrations is quite a bit less than it would be to do all of our electric generating units. I don't remember how many electric generating units have BART at location, it's not the entire

CAIR source list, but it's smaller. Any more questions? Does anybody have any discussion they want to have on the trading aspects, whether they'd like to see trading or not like to see trading? Feelings on trading?

Charlie Means

I think, obviously, the EGUs have a very strong preference for a trading program. It's essential particularly for smaller systems in order to beat the implementation deadlines and it makes cost significantly less.

Rick Campbell

Dean, I'll call on you. I was hoping to talk to you before this. Do you have any feelings on industrial boilers in the trading program?

Dean

I second Mike's comment. If in fact if we go that route that certainly being in the reginional trading. I think would be an absolute necessity.

Rick Campbell

Any discussion on the Clean Air Mercury Rule? Whether the group would prefer to stay with just electric generating units? Again the decision tree could go away from electric generating units then it's a state rule which is going to take longer and be a lot more difficult to get approved by EPA.

Mike Menne

Rick , I do have a question. Most of the other fossil fuels do not contain mercury, what else were you looking at?

Rick Campbell

We'd have to look and see what other major sources there are in the state. What would make it difficult would be going through the inventory and trying to figure who even submits enough data for us to determine that they are a major source of mercury. I don't know that our emission inventory system is that specific.

Mike Menne

I would hate for the department to have to go through that.

Rick Campbell

I guess there are no comments on the trading aspects of CAMR either. I'm assuming you are all still supportive of that? Why don't we table this discussion and let you all think about it and

maybe we can start out the next meeting with people's thoughts and feelings on any comments or questions that you come up with in the mean time on these items. That way at the next meeting we'll come in with some EPA model rules and have that in the background as a decision that everybody makes that we want to go through. In conclusion, we have communications, we're in the process of developing a web site. I've made all of the inputs on it and it's just going through the review process to be put out. You have to go through departmental review and it's in that stage right now. Hopefully in the next few days that will be out and I will make sure and put all of our slides up and get a meeting summary up. It will also have links to EPA's regulations and the Clean Air Interstate and Clean Air Mercury Rule website. They have a lot of information there. And also I'll put a link out there for the Federal Implementation Plan and any other documentation that I can think of. Secondary information distribution I have an email group list that I have started. A lot of you probably got an email from me already on it. If you didn't get an email from me just make sure that you get an email address on our sign in sheet or get me an email address and I'll put you on that list. As soon as our website gets out I'll email the group and let you know what the web address is.

Our next steps: unresolved items – all the questions that we have up there as far as what direction the group wants to take, I think some have an idea what some of the group wants to take. Any volunteers to write up information through the process will be gladly taken. It is called a workgroup. The rule development for the next meeting we'll be starting off with trying to get some directional feedback from the group as to whether we want to go down the course of trying to get into EPA's regional trading program or we're going to do something different. That's brings us to date, time, and location of the next meeting. I thought I would like to see meeting every two to three weeks because our time schedule is fairly aggressive. Do we want to try and set a date or do you want me to just pick a date and email it out to the group. It's going to be hard to compress this many schedules.

Agreed to just pick a date and send it out.
I'll try and pick a date in the next three weeks out and email it out to the group hopefully by the end of this week. Would you prefer earlier of later in the day?

Agreed this was a good time.

With that I'll schedule a meeting and send you all an email and see you all in about three weeks.